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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/191,708	11/13/1998	BRIJ BHUSHAN GARG	L0012/7004	8933

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EXAMINER

LY, ANH VU H

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/191,708

**Applicant(s)**

GARG ET AL.

**Examiner**

Anh-Vu H Ly

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 09, 2004 has been entered.

### ***Claim Objections***

2. Claims 3 and 4 are objected to because of the following informalities: in line 1 "said apparatus" lacks clear antecedent basis. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindberg (US Patent No. 6,366,579) in view of Sharony et al (US Patent No. 5,495,356). Hereinafter, referred to as Lindberg and Sharony.

With respect to claims 1-5, Lindberg discloses in Figs. 11-12 a space/time switching unit (apparatus for switching data from any of a plurality of inputs to any of a plurality of outputs) wherein (col. 18, lines 41-48) the data words (data blocks containing a fixed number of bits data) in the received time slots are disassembled to bit level such that each data word is divided into a

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number of bits BIT0 to BIT7. Each bit (bit-pack comprising 1-bit) is then distributed to a respective row of speech stores SS of that row (at least one apparatus for receiving respective ones of said "O" input bit packs from each of said plurality of inputs organized in a combination of input data rails and time slots). Herein, each bit is considered as a bit-pack by the examiner and wherein, each bit-pack contains only 1 bit (each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers).

The multiplexors 8/1 MUXs controlled by the associated control stores CS are operative to output selected bits from the speech stores (at least one apparatus for selecting any of the respective input bit packs from any of the rails in any of the time slots). Lindberg does not disclose an apparatus for conveying said selected bit pack to any output data position within a combination of output data rails and time slots. Sharony discloses (col. 2, lines 1-17 and Fig. 3) a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one or all of N outputs (at least one apparatus for conveying the selected bit pack to any output data position within a combination of output data rails and time slots). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an apparatus for broadcasting the selected input data to any output channels as a combination of space/time channels in Lindberg's system, as suggested by Sharony, to effectively broadcasting data to a plurality of destinations simultaneously.

4. Claims 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharony et al (US Patent No. 5,495,356) in view of Lindberg (US Patent No. 6,366,579).

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With respect to claims 6, 11, and 16-22, Sharony discloses in Fig. 3, a multidimensional switching network for broadcasting any of the input data to a plurality of output channels. Sharony does not disclose wherein data formatted as data blocks containing a fixed number of bits of data, each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers. Lindberg discloses in Figs. 11-12 a space/time switching unit wherein (col. 18, lines 41-48) the data words (data blocks containing a fixed number of bits data) in the received time slots are disassembled to bit level such that each data word is divided into a number of bits BIT0 to BIT7. Each bit (bit-pack comprising 1-bit) is then distributed to a respective row of speech stores SS of that row. Herein, each bit is considered as a bit-pack by the examiner and wherein, each bit-pack contains only 1 bit (each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the technique of dividing input data into data blocks and disassembling each data block into individual bits and switching each bit individually in Sharony's system, as suggested by Lindberg, to broadcasting only the selected bits to the selected output channels. Sharony discloses in Fig. 3, a generalized switching network, wherein a plurality of selection blocks 32 are configured to broadcast data from one or more input channels to one or more output channels as a function of space dimension, wavelength dimension, and time slot dimension (M selection blocks, each configured to select a bit pack of respective ones of said "O" input bit packs from each of said N input positions for a different one of the output positions). Further, Sharony discloses in Fig. 3, a generalized switching network, wherein data, arranged as time slots 35 (bit packs) and space connections 33 from  $m \times m$  blocks 31 (rails), are received at the  $n \times l_n$  blocks 32 (apparatus for receiving

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respective ones of said "O" input data arranged as bit packs in T time slots on R rails. Further, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (apparatus for selecting data from any of the R rails and latching the selected data during a predetermined time slot to thereby select a bit pack of predetermined R and T values and conveying the selected bit pack to any output data position of predetermined T2 and R2 values).

With respect to claims 7 and 12, Sharony discloses in Fig. 3, each block 32 received input data from different  $m \times m$  star block 31 (a  $T2 \times R2$  output bit map configured for receiving a selected bit pack in each location from a different one of the M selection blocks).

With respect to claims 8 and 13, Sharony discloses in Fig. 3, each of  $n \times l_n$  block 32 is processed in parallel and wherein the  $n \times l_n$  block 32 broadcasts the selected input data to one or more output channels (a second  $T2 \times R2$  output bit map configured to be loaded in parallel from first output bit map).

With respect to claims 9 and 14, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (apparatus configured to arrange input bit packs as an array of T time slots on R rails and to convey output bit packs from the second  $T2 \times R2$  bit map on R2 rails in T2 time slots).

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With respect to claims 10 and 15, Sharony discloses in Fig. 3, a plurality of input connections N-1 and a plurality of output connections N-1. Sharony does not disclose that  $N=M=768$ . However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure such plurality of input and output connections to any number of input and output connections in Sharony's system, as a function of cost and complexity of the switching system.

***Response to Arguments***

5. Applicant's arguments filed June 09, 2004 have been fully considered but they are not persuasive.

Applicant argues on page 9 that "It is evident from at least claim 1 above, that the Applicant's invention is directed at least in part to an apparatus for switching data where respective ones of the "O" bit packs from each of the plurality of inputs are switched in parallel". Examiner respectfully disagrees. Independent claim 1 does not recite an apparatus for switching bit packs in parallel. But rather, as highlighted by the applicant in page 9 that "respective one of said "O" ... from each of said plurality on inputs". This implies that the apparatus receives respective bit packs from each of plurality of inputs and nowhere that highlight claims an apparatus that performs parallel bit packs switching.

Applicant argues on pages 9-12 that the specification teaches an apparatus for performing parallel bit packs switching. However, it is not related to the claimed invention. Further, for clarification purposes, "receiving respective ones of said "O" input bit packets from each of said plurality of inputs" does not mean that bit packs are received in the sequential order. Bit packs

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can be received in any order and at any time as long as the apparatus received the respective bit packs from each of plurality of inputs.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRIMARY EXAMINER

KWANG BIN YAO

avl

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